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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,937	06/22/2001	Sang Yeon Kim	0630-1276P	5898
2292	7590	10/12/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			AHN, SAM K	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/885,937	Applicant(s) KIM, SANG YEON	
	Examiner Sam K. Ahn	Art Unit 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/22/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

2. Claims 1-18 are objected to because of the following informalities:

In claim 1, line 4, delete "integer n to" and insert "integer n based on an outside control signal to" as outside control signal provides the integer n to the address generator.

In claim 1, line 10, delete "an outside" and insert "said outside".

In claim 2, lines 3 and 4, delete "0" and insert "zero".

In claim 3, line 2, delete "of filter taps" and insert "of said FIR filter coefficients".

In claim 4, line 3, delete "of filter taps" and insert "of said FIR filter coefficients".

In claim 5, line 1, delete "said window" and insert "said corresponding window".

In claim 7, line 1, delete "low-pass or high-pass" and insert "low-pass, high-pass".

In claim 7, line 8, delete "integer n to" and insert "integer n based on an outside control signal to".

In claim 7, line 14, delete "an outside" and insert "said outside".

In claim 7, line 19, delete "pass or high-pass" and insert "pass, high-pass".

In claim 7, line 20, delete "said low-pass" and insert "said nth low-pass, high-pass or band-pass".

In claim 7, line 20, delete "coefficients" and insert "coefficient value".

In claim 9, line 2, delete "of filter taps" and insert "of said FIR filter coefficients".

In claim 10, lines 3-4, delete "of filter taps" and insert "of said FIR filter coefficients".

In claim 11, line 1, "said window" and insert "said corresponding window".

In claim 13, line 4, delete "integer n" and insert "integer n based on an outside control signal".

In claim 13, line 9, delete "an outside" and insert "said outside".

In claim 13, line 11, delete "impulse function" and insert "impulse response function".

In claim 15, line 2, delete "of filter taps" and insert "of said FIR filter coefficients".

In claim 16, line 3, delete "of filter taps" and insert "of said FIR filter coefficients".

In claim 17, line 1, "said window" and insert "said corresponding window".

Claims 6,8,12,14 and 18 directly depend on claim 1,7 or 13.

Appropriate correction is required.

### ***Allowable Subject Matter***

3. Claims 1-18 would be allowable if rewritten or amended to overcome the claim objections, set forth in this Office action.
4. The following is a statement of reasons for the indication of allowable subject matter:  
  
Present application discloses an FIR coefficient generator comprising an address generator, a look-up table, a divider, a multiplexer, and a multiplier configured as

illustrated in figure 4. Closest prior art, Eun, teaches generation of filter taps for filtering the input signal and further comprising an address generator and a memory. However, Eun does not teach all of the limitations claimed. Therefore, prior art viewed solely or in combination, does not teach all of the limitations.

### **Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Limberg teaches filtering of received signal comprising address generator coupled to a SIN and COS memory for multiplying.

Yazu et al. disclose an FIR filter for filtering signals comprising memory elements coupled to multiplier.

Tanaka discloses a decimator circuit executing FIR filtering comprising coefficient memory, multiplier, adder and other components.

6. This application is in condition for allowance except for the following formal matters:  
Claim objections.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

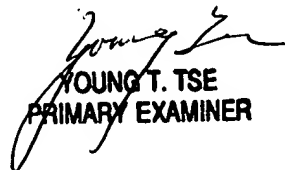
Art Unit: 2637

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam K. Ahn  
10/7/04

  
YOUNG T. TSE  
PRIMARY EXAMINER